



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,488	06/30/2000	Paul A. Griffin	8999-029	2307

20583 7590 04/13/2004

JONES DAY  
222 EAST 41ST ST  
NEW YORK, NY 10017

EXAMINER

AHMED, SAMIR ANWAR

ART UNIT	PAPER NUMBER
----------	--------------

2623

DATE MAILED: 04/13/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/607,488

Applicant(s)

GRIFFIN, PAUL A.

Examiner

Samir A. Ahmed

Art Unit

2623

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-17, 23, 25, 35-43, 45 and 46 is/are allowed.
- 6) ☒ Claim(s) 1-4, 18-22, 24, 26-34, 44, 47 and 48 is/are rejected.
- 7) ☒ Claim(s) 5-6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2623

1. The amendment filed 1/27/04 have been entered and made of record.
2. In response to applicant's amendment filed 1/27/04 the rejection of claims 20-30 under 112, second paragraph is withdrawn.
3. Applicant's arguments filed 1/27/04 have been fully considered but they are not persuasive with regard to claims 1, 3-4, 21-22, 31 for the following reasons:

Applicant alleges, " claim 1 recites a method for constructing a vector space [,]" (page 12, line 9-page 13, line 2). The Examiner disagrees. Firstly, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., two sets of data samples in two sample data bases as recited in the specification, page 9, lines 23-25 and step 330 of Fig. 3) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Secondly, claim 1 recites "plurality of data samples in a first sample database", i.e. clearly sets of data samples in one data base is claimed.

Applicant alleges, " The Office Action suggests [,]" (page 13, lines 3-18). The Examiner disagrees. Firstly, the Examiner equates an image query to each data sample. Secondly, this is consistent with the method of claim 1, because Swets uses a list of search probes (image queries or test images)(i.e., plurality of data samples) (see Fig. 8 b) and a list of training images (i.e., plurality of basis sample elements) (see Fig. 8 a) and comparison must be made between each test probe (each sample data) and every image in the database. It is clear that Swets anticipated claims 1, and 31.

Applicant alleges, " In the present instance, the cited arts, [,]" (page 13, line 28- page 14, line 11). The Examiner disagrees. Firstly, Both Swets (page 834, paragraph 2.3-page 835, paragraph 4) and Moghaddam (See Fig. 2, page 698, paragraph 2.2) teaches calculating raw matching scores between two sets of data samples. Secondly, both Moghaddam et al. and Swets teaches image linear transformation called the principal component analysis and are combinable. Thirdly, the motivation is to generate a rotation matrix as recited in the reference (Moghaddam) is to decorrelate the data and make explicit the invariant subspaces of the matrix operator  $\Sigma$ .

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 20-22, 24, 26-30 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 20 recites the limitation "encoding the known data samples" in line 6 and the limitation "encoding the probe data samples" in line 8. There is insufficient antecedent basis for this limitation in the claim.

As to claims 22, 24, 26, refer to claim 20 rejection.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2623

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 18-20, 31-32, 44, 47, are rejected under 35 U.S.C. 102(b) as being anticipated by Daniel L. Swets et al., "Using Discriminant Eigenfeatures for Image retrieval", IEEE Transactions on Pattern Analysis and Machine Intelligence, vol. 18, No. 8, pp 831-838, August 1996. The grounds for rejections stated in paragraph 4 of the Office Action mailed on 08/27/03 paper number 3, are incorporated by reference herein.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3-4, 21-22, 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daniel L. Swets et al., "Using Discriminant Eigenfeatures for Image retrieval", IEEE Transactions on Pattern Analysis and Machine Intelligence, vol. 18, No. 8, pp 831-838, August 1996 as applied to claims 1 and 31 above and further in view of Baback Moghaddam et al., "Probabilistic Visual Learning for Object Representation", IEEE Transactions on Pattern Analysis and Machine Intelligence, vol. 19, No. 7, pp 696-710, July 1997. The grounds for rejections stated in paragraph 6 of the Office Action mailed on 08/27/03 paper number 3, are incorporated by reference herein.

9. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Daniel L. Swets et al., "Using Discriminant Eigenfeatures for Image retrieval", IEEE Transactions

Art Unit: 2623

on Pattern Analysis and Machine Intelligence, vol. 18, No. 8, pp 831-838, August 1996 as applied to claim 31 above and further in view of P. Jonathan Phillips, "Support Vector Machines Applied to Face Recognition", Advances in Neural Information Processing Systems 11, M.J. Keans, S.A. Solla, and D.A. Chon, MIT Press, 1999. The grounds for rejections stated in paragraph 7 of the Office Action mailed on 08/27/03 paper number 3, are incorporated by reference herein.

***Allowable Subject Matter***

10. Claims 5-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The grounds for objections stated in paragraph 8 of the Office Action mailed on 08/27/03 paper number 3, are incorporated by reference herein.

11. Claims 7-17, 23, 25, 35-43, 45-46 are allowed.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 2623

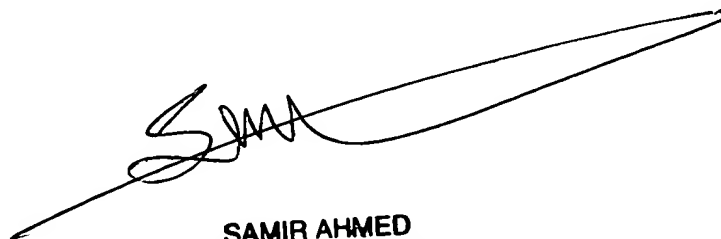
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samir A. Ahmed whose telephone number is 703-305-9870. The examiner can normally be reached on Mon-Fri 8:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703-308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SA

A handwritten signature in black ink, appearing to read 'SMA', is written over a long, thin horizontal line.

**SAMIR AHMED  
PRIMARY EXAMINER**